

TUTORIALS

SENSORS/ACTUATO

Arduino - Software Installization

Arduino - Hardware Preparation

Arduino - Hello

World

Arduino - Code

Structure

Arduino - Serial

Monitor

Arduino - Serial

Plotter

Arduino - LED -

Blink

Arduino - LED -Blink Without Delay

Arduino - LED -

Fade

Arduino - Button

Arduino - Button -

Debounce

Arduino - Button -

Long Press Short

Press

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LED

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Toggle LED

Arduino - Button

Toggle Relay

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Piezo Buzzer

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Servo Motor

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Arduino - Temperature Humidity

In this tutorial, we are going to learn how to read temperature and

DHT11 and DHT22 are sensors that we can use to measure

temperature and humidity. They are similar to each other. You can

If you only want to get temperature, we recommend using a

waterproof DS18B20 temperature sensor » instead. It is an

inexpensive and neat sensor. You can put it in hot or cold water.

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humidity value from DHT11 or DHT22 sensors

choose one of them, depending on your needs

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- DHT11

Arduino Code

- DHT22

Video

Alternative

DHT11 and

DHT22

sensors

The Best Arduino

Starter Kit

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Hardware Required

1 × Arduino UNO or Genuino UNO	-
1 × USB 2.0 cable type A/B	
1 × Temperature and Humidity Sensor DHT11	Ħ
1 × Temperature and Humidity Sensor DHT22	Ħ
1 × 10 kΩ resistor	Ħ
1 × Breadboard	Ħ
n × Jumper Wires	Ħ

Please note: These are affiliate links. If you buy the components through these links, We may get a commission at no extra cost to you. We appreciate it

About DHT11 and DHT22 Temperature and **Humidity Sensor**

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- Programming (with a library) is similar (only one line of code is different)

The differences between DHT11 and DHT22

	DHT11	DHT22
Price	ultra low cost	low cost
Temperature Range	0°C to 50°C	-40°C to 80°C
Temperature Accuracy	± 2°C	± 0.5°C
Humidity Range	20% to 80%	0% to 100%
Humidity Accuracy	5%	± 2 to 5%
Reading Rate	1Hz (once every second)	0.5Hz (once every 2 seconds)
Body size	15.5mm x 12mm x 5.5mm	15.1mm x 25mm x 7.7mm

As you can see, the DHT22 is a little more accurate, larger range but more expensive than DHT11.

Pinout

DHT11 and DHT22 sensor in original form have four pins:

GND pin needs to be connected to GND (0V)

VCC pin needs to be connected to VCC (5V)

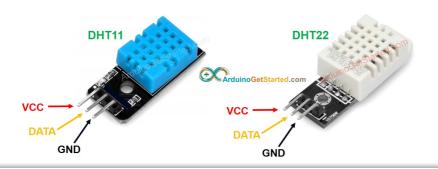
DATA pin the pin is used to communicate between the sensor and Arduino

NC pin Not connected, we can ignore this pin



Some manufacturers provide DHT11 and DHT22 sensor in module form with three pins: GND, VCC and DATA pins.

Note that in module form, the order of the module's pins can vary between manufacturers. ALWAYS use the labels printed on the module. Look closely!



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Sension - LED Arquino - Touch Rotentiometer dade Sensor Toggle LED

Sensor - Relay Arduino - Touch Arduino - Motion Sensor Toggle

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Wiring Diagram

Wiring to Arduino is the same for both sensors. In orginal form, A resistor from 5K to 10K Ohms is required to keep the data line high and in order to enable the communication between the sensor and the Arduino

Arduino - DHT11 Sensor Wiring

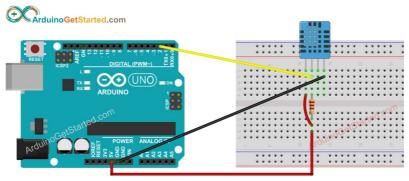


Image is developed using Fritzing. Click to enlarge image

Arduino - DHT22 Sensor Wiring

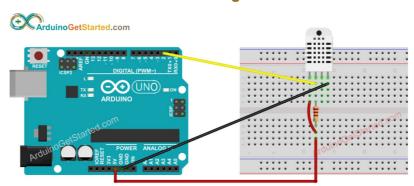
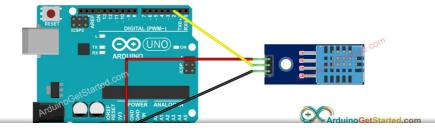


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Arduino - DHT11 Module Wiring

Most of DHT22 sensor modules have a built-in resistor, so you don't need to add it. it saves us some wiring or soldering works.



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Altei DHT11 and DHT22

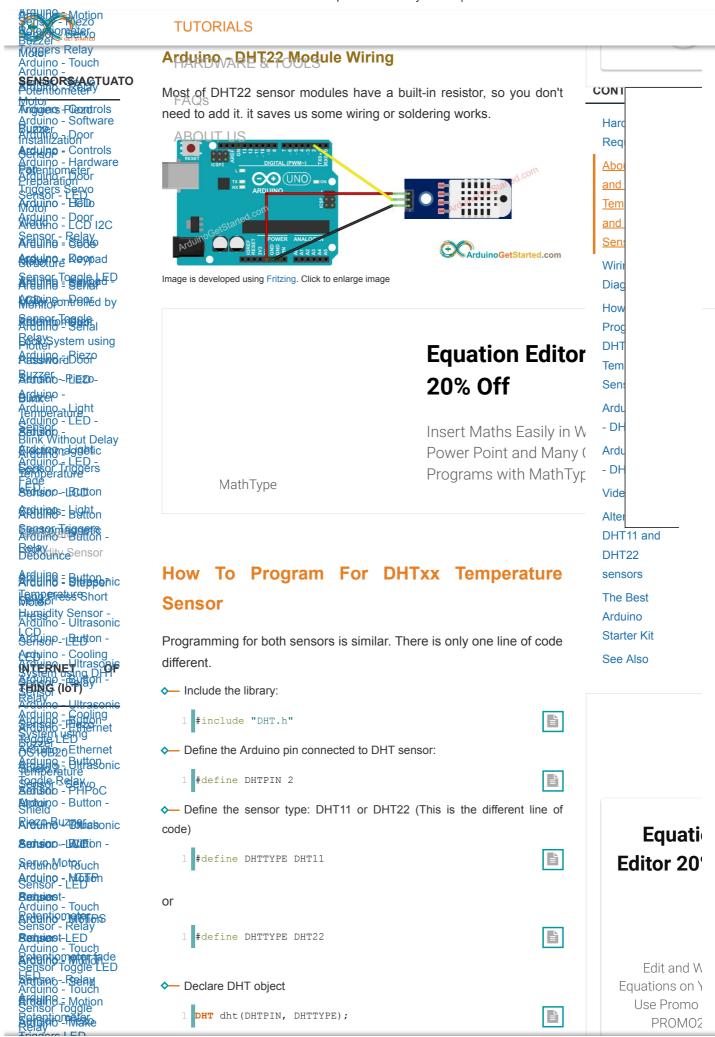
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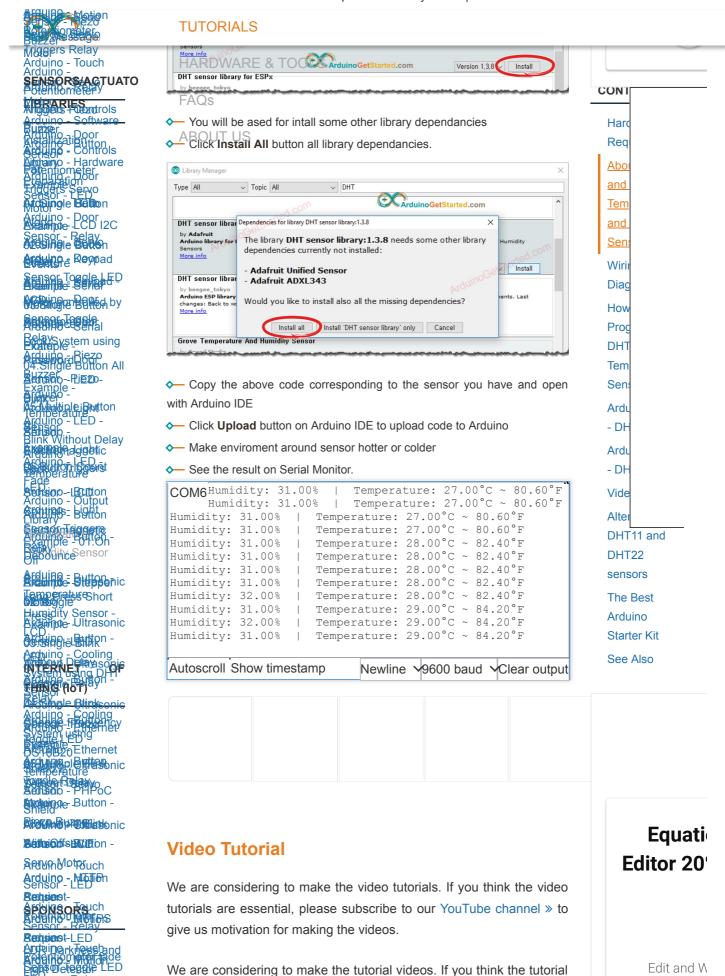
Miggers Relay Arduino - Touch HARDWARE & TOOLS SENSORS ACTUATO CONT **FAQs** Hard unier Idijino Door NealHeatieutton Equap - Controls Arduino Code - DHT22 Req risolu = Cunitois taino - Hardware fentiometer la particon dels Servo 1801 - Leiton Abc and * Created by ArduinoGetStarted.com <u>Tem</u> Arduino - Poor Akaumpie - Poor 120 4 * This example code is in the public domain and Sensor - Relay Azggingle Editor Sen Tutorial page: https://arduinogetstarted.com/tutorials/ Arabino Reppad Wirii Diag #include "DHT.h" How 1.0 #define DHTPIN 2 Beavey stem using Arthurs Biezo 4.5 mg/g Button All Beavey Button All Beavey Button Plezo-Example - As Mindiple Blutton Tenung - LED - Blink Without Delay Bink Without Bink With Bink Without Bink Without Bink Without Bink Without Bink Without Prog #define DHTTYPE DHT22 DHT 13 DHT dht (DHTPIN, DHTTYPE); Tem Sen 15 void setup() { Serial.begin(9600); Ardu dht.begin(); // initialize the sensor - Dh Ardu - DH 20 void loop() { // wait a few seconds between measurements. Vide delay(2000); Altei Sensor Triggers Arguibre - 01:0h Exambre Sensor // read humidity DHT11 and float humi = dht.readHumidity(); DHT22 // read temperature as Celsius sensors Arduing Buttosenic float tempC = dht.readTemperature(); Temperatuseshort // road tomnoraturo as Fahronhoi The Best Hungidity Sensor -Akampe Ultrasonic 可見的自己的形成。 Arduino Starter Kit Arguino - Cooling If you compare two above code, you realize that there is one line See Also different (line 11) THIS (NOT) Reidingle Blink **Quick Steps** Ethernet Connect Arduino to PC via USB cable AFILIANCE PHOPONIC TEMPORATURE VANDARIO - PHPOC Open Arduino IDE, select the right board and port On Arduino IDE, Go to Tools » Manage Libraries Michainne-Button -RIPERING PROPERTY OF THE PROPE oo sketch_feb29a | Arduino 1.8.12 × Equation ArduinoGetStarted.com File Edit Sketch Tools Help WARTION -Ctrl+T Auto Format Ø Editor 20 ARINA Motoruch Archive Sketch Arduino - Mation Sensor - LED sketch_feb29a Fix Encoding & Reload Remainent-Manage Libraries Ctrl+Shift+I 1 void AFRICIAS DE SENSOR - RELAY Serial Monitor Ctrl+Shift+M to run once: Serial Plotter Ctrl+Shift+L 3 Retainest-LED NIEI101 / WIEININA Eiron Antrinarkijese Antrinarkijese Antrinarkijesese Antrinarkijeseseseseseseseseseseseseseseseseses Edit and W Search "DHT", then find the DHT sensor library by Adafruit Equations on \ AFGHIND - Motion Sensur Toggle Click Install button to install the library.

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Reference Property

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videos are essential, please subscribe to our Youtube channel. It will

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give us lots of motivation for making the videos.

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